

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
20 November 2003 (20.11.2003)

PCT

(10) International Publication Number
WO 03/096114 A1(51) International Patent Classification⁷: **G02F 1/136**Apt. 110-802, 331, Yatap-dong, Bundang-ku, 463-828
Seongnam-city, Kyungki-do (KR).

(21) International Application Number: PCT/KR02/01392

(22) International Filing Date: 24 July 2002 (24.07.2002)

(74) Agent: **YOU ME PATENT & LAW FIRM**; Teheran
Bldg., 825-33, Yoksam-dong, Kangnam-ku, 135-080
Seoul (KR).

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:
2002-25536 9 May 2002 (09.05.2002) KR(71) Applicant (for all designated States except US): **SAM-
SUNG ELECTRONICS CO. LTD.** [KR/KR]; 416, Mae-
tan-dong, Paldal-ku, 442-370 Suwon-city, Kyungki-do
(KR).

(72) Inventors; and

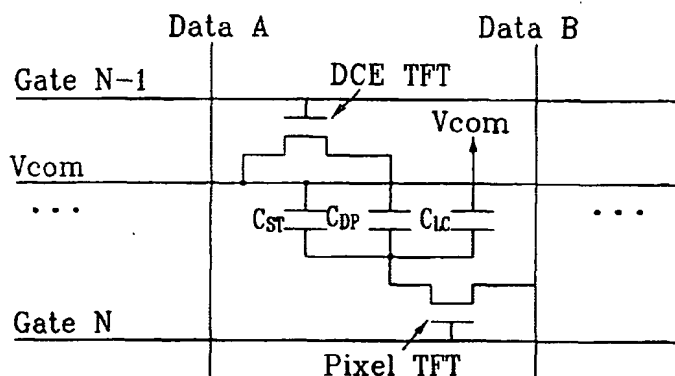
(75) Inventors/Applicants (for US only): **SHIN, Kyong-Ju**
[KR/KR]; Samjeong Seonbi Maeul 102-504, 289-12,
Bora-ri, Kiheung-eup, 449-904 Yongin-city, Kyungki-do
(KR). **KIM, Hee-Seob** [KR/KR]; Shinyoungtong
Ilyundai Apt. 110-304, 865-1, Banwol-ri, Taeon-eup,
Hwasung-kun, 445-973 Kyungki-do (KR). **HONG,
Sung-Kyu** [KR/KR]; Hwanggol Jookong Apt. 136-1806,
955-1, Youngtong-dong, Paldal-ku, 442-470 Suwon-city,
Kyungki-do (KR). **LEE, Baek-Woon** [KR/KR]; Dongbu(81) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK,
LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX,
MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI,
SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN,
YU, ZA, ZM, ZW.(84) Designated States (regional): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK,
TR), OAPI patent (BF, BJ, CI, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: MULTI-DOMAIN LIQUID CRYSTAL DISPLAY AND A THIN FILM TRANSISTOR SUBSTRATE OF THE SAME

(57) Abstract: A thin film transistor array
panel is provided, which includes: a gate
wire formed on an insulating substrate;
a data wire formed on the insulating
substrate, insulated from the gate wire,
and intersecting the gate wire; a storage
electrode wire formed on the insulating
substrate, insulated from the data wire, and
intersecting the data wire; a plurality of
pixel electrodes provided on the respective
pixel areas defined by the intersections of
the gate wire and the data wire, each pixel
electrode having a cutout; a plurality of
direction control electrodes provided on
the respective pixel areas defined by the
intersections of the gate wire and the data
wire; a plurality of first thin film transistors
connected to the gate wire, the data wire,
the storage electrode wire, and the direction
control electrodes.

and the pixel electrodes; and a plurality of second thin film transistors connected to the gate wire, the storage electrode wire, and the direction control electrodes.